## REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-5 are currently pending in this application. None of the claims have been amended. Accordingly, no new matter has been added.

In view of the remarks herein, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

### *Double Patenting Issues*

Claims 1- 5 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting, as being obvious over claims 1, 4-6 and 21 of copending Application No. 10/485,896. Applicants respectfully traverse.

Applicants submit that it appears that the Examiner has cited the wrong application number, as Application No. 10/485,896 is an abandoned application by different inventors, and is thus not a copending application of Applicants.

Reconsideration and withdrawal of this rejection are respectfully requested.

### *Issues Under 35 U.S.C. § 102(b)*

**Momoda '579**

Claims 1-5 stand rejected under 35 U.S.C. 102(b) as being anticipated by Momoda et al. (U.S. 2003/0036579) (hereinafter Momoda '579). Applicants respectfully traverse.

The Examiner asserts that Momoda '579 discloses a photochromic cured product obtained by polymerizing a curable composition comprising (A) a polyfunctional polymerizable

monomer; (B) a silyl monomer; (C) another radically polymerizable monomer; and, (D) a photochromic compound.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of anticipation. For anticipation under 35 U.S.C.§102, the reference must teach each and every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993). To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present". *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Id.*

Momoda '579 discloses a photochromic cured product obtained by polymerizing a curable composition. The curable composition of Momoda '579 comprises a polyfunctional polymerizable monomer (A), a silyl monomer (B), a radically polymerizable monomer (C) and a photochromic compound (D) (see, for example, [0011]-[0015]).

It appears that the Examiner believes that component (B) of Momoda '579 is equivalent to the presently claimed "silicon compound having a silanol group or a functional group capable of forming a silanol group upon hydrolysis." Applicants respectfully disagree.

The present claims require that the silicon compound having a silanol group has "**no radically polymerizable group**" (emphasis added). Component (B) of Momoda '579 does not meet this limitation. At column [0013], Momoda '579 explicitly discloses that component (B) is

a radically polymerizable monomer having a silanol group. As such, Momoda '579 does not teach each and every limitation of the present invention and thus fails to anticipate the same.

Reconsideration and withdrawal of this rejection are thus respectfully requested.

**JP '713**

Claims 1-5 stand rejected under 35 U.S.C. 102(b) as being anticipated by Momota et al. (JP 2003-128713) (hereinafter JP '713). Applicants respectfully traverse.

The Examiner asserts that JP '713 teaches a curable composition containing a photo-base generation compound, a radically polymerizable compound having an epoxy group, and a photochromic compound. The Examiner further asserts that JP '713 discloses that it is preferred to use together a radical polymerization nature monomer which has a basis which generates a silanol group.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of anticipation. JP '713 teaches a curable composition comprising a photo-base generation compound, a radically polymerizable monomer having an epoxy group and a photochromic compound. The composition disclosed in JP '713 is used as a photochromic coating agent, and can be used as an optically base-generating agent in place of an amine compound, in order to improve shelf life. In JP '713, the substrate is plasma-treated before it is coated. At [0041], JP '713 explicitly discloses the use of a radical polymerization monomer having a silanol group.

As noted above, the present claims require that the compound having a silanol group has "no radically polymerizable group." The "radical-polymerizable monomer having a silanol group or a group that generates a silanol group by hydrolysis" disclosed by JP '713 clearly fails to meet

this limitation, as it is a compound having a radical-polymerizable group in its molecule. In contrast, the present "silicon compound having a silanol group or a group that generates a silanol group by hydrolysis and having no radical-polymerizable group" has no radical-polymerizable group in its molecule.

Evidently, JP '713 fails to teach each and every limitation of the present invention and thus fails to anticipate the same. Accordingly, Reconsideration and withdrawal of this rejection are respectfully requested.

**WO '236**

Claims 1-5 stand rejected under 35 U.S.C. 102(b) as being anticipated by Kadowaki (WO 02/93236; also US 2004/0109133) (hereinafter WO '236). Applicants respectfully traverse.

The Examiner asserts that WO '236 teaches a method for manufacturing plastic photochromic lenses, comprising the step of curing a composition comprising a monofunctional or bifunctional methacrylic ester monomer, a trifunctional or greater methacrylic ester monomer, one or more photochromic dyes, an organic silicon compound, and a colloidal metal oxide. The Examiner further asserts that WO '236 teaches that the quantity of the dye added is maintained within the claimed range "[i]n consideration of the high transmittance during color fading and suitable degree of light blocking during coloration that are required of eyeglass lenses."

Applicants submit that the Examiner has failed to establish a *prima facie* case of anticipation. WO '236 does not teach a composition comprising, simultaneously, all presently claimed components. Rather, WO '236 discloses two different and non-related compositions: (1) a monomer composition comprising a monofunctional or bifunctional methacrylic ester

monomer, a trifunctional or greater methacrylic ester monomer, and one or more photochromic dyes, which composition is radiated with ultraviolet light; and (2) a second composition, comprising an organic silicon compound and a colloidal metal oxide, which is coated over the radiated monomer.

Evidently, WO '236 fails to explicitly or implicitly teach a curable composition as presently claimed. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

***Issues Under 35 U.S.C. § 103(a)***

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as being obvious over Momoda et al. (U.S. 2005/0109133) in view of Chen et al. (WO 98/38924) (hereinafter WO '924). Applicants respectfully traverse.

Initially, Applicants note that the Examiner appears to be referring to U.S. 2005/0263745 (also WO 01/05854) (hereinafter Momoda '745), rather than "U.S. 2005/0109133". The following remarks are directed to the Momoda '745 reference.

The Examiner asserts that Momoda '745 discloses a curable photochromic composition and article, wherein the composition comprises a photochromic compound, and acrylate and epoxy monomers. The Examiner acknowledges that Momoda '745 fails to teach the claimed silanol or silanol-yielding compounds, and relies on the teachings of WO '924 to cure this deficiency, asserting that WO '924 teaches radically polymerizable silane-containing monomers used in photochromic coating compositions.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Additionally, there must be a reason why one of ordinary skill in the art would modify the reference or combine reference teachings to obtain the invention. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). There must be a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* The Supreme Court of the United States has recently held that the "teaching, suggestion, motivation test" is a valid test for obviousness, albeit one which cannot be too rigidly applied. *Id.* Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

The composition of the present invention is suitably used as a photochromic coating agent for forming a photochromic coating layer on a substrate surface, such as a lens, by applying it to the substrate surface and curing it. In the present invention, high adhesion to the substrate can be achieved by simply washing with a basic aqueous solution (rather than utilizing labor-intensive treatments, such as plasma treatments and the like; see Specification, page 2, lines 26-33 and page 4, lines 30-34). This superior and unexpected result is achieved, *inter alia*, by incorporating a radical non-polymerizable silyl compound as a component in the curable composition (see page 4, lines 18 to 30 of the Specification).

Momoda '745 discloses a curable photochromic composition. As correctly acknowledged by the Examiner, Momoda '745 fails to teach the claimed silanol or silanol-yielding compounds. WO '924 fails to cure the deficiencies of Momoda '745. Moreover, Applicants respectfully submit that there is no rational underpinning to support the legal conclusion of obviousness, since the rejections include an improper combination of references.

The Examiner states that "since the claimed silanol or silanol-yielding compounds are known to be useful within photochromic compositions at the time of invention, one would have been motivated to utilize them for their art recognized function as taught by Chen within the photochromic compositions of Momoda. It has been held that it is prima facie obvious to utilize a known compound for its art recognized function." Applicants respectfully disagree.

In the curable composition disclosed by Momoda '745, the monomer required cannot be just any monomer. As such, although WO '924 generally discloses the use of "silanes," which include radical non-polymerizable silyl compounds, as adhesion monomers, a radical non-polymerizable silyl compound cannot function as the adhesion monomer in the composition of Momoda '745. Thus, the teachings of these references cannot be combined.

The polymerization-curing mechanism in the coating composition disclosed in WO '942 is a polymerization-curing mechanism using a so-called "polythiol-polyene reaction" by application of light. In the coating composition of WO '924, therefore, the radical non-polymerizable silyl compound has reactivity to a polyol, and hence works as a monomer. However, this compound does not have a radical-polymerizable group, and thus would not work as a monomer in the curable composition of Momoda '745.

At page 3, lines 17 to 20, WO '924 discloses the following: "there is no or substantially no homopolymerisation of the allylic or vinyl monomers under UV reaction conditions. This may be contrasted with prior art coatings in which acrylic monomers are a major component." Thus, it is clear that the polymerization mechanism in the coating composition of WO '924 differs from the polymerization mechanism in a composition containing an acrylic monomer as a main component. As such, and as indicated above, the monomer of WO '924 cannot be used in the composition of Momoda '745.

Further, Applicants note that the "silanes" disclosed by WO '924 include "radical-polymerizable silyl compounds," such as 3-methacryloxypropyltrimethoxysilane and vinylsilanolate (see page 28, lines 27 and 32), as well as "radical non-polymerizable silyl compound". Thus, it is evident that WO '924 regards both of these two types of compounds as having the same function. In contrast, in the present invention, the "radical non-polymerizable silyl compound" and the "radical-polymerizable silyl compound" are clearly distinguished, and even if a "radical-polymerizable silyl compound" is used, the effect of the present invention cannot be obtained without also using a "radical non-polymerizable silyl compound," as presently claimed. WO '924 does not teach or suggest the use of both, or the superior and unexpected results obtained by doing so.

Because the invention, as set forth in Applicants' claims, is not disclosed or made obvious by the cited prior art, reconsideration and withdrawal of this rejection are respectfully requested.

***Conclusion***

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Vanessa Perez-Ramos, Reg. No. 61,158, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____ #42,874

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